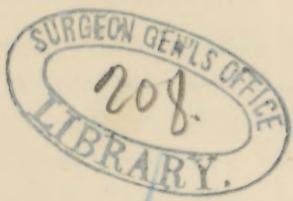


Parker (W.T.) W. T. Parker Woodbury  
Complements  
Concerning the Climate of  
New Mexico, P. T. Parker







## CONCERNING THE CLIMATE OF NEW MEXICO.

By W. THORNTON PARKER, M.D. (MÜNICH.)

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**I**T appears to one as if health resorts cease to be *health* resorts when they become easily accessible to invalids. Take for instance, the State of Minnesota, so celebrated as a sanitarium in its early days, when comparatively inaccessible, but since it is possible to reach it so easily, its fame has disappeared—the bubble has burst. The great increase of population, the destruction of forest, the damming of streams, the upheaval of the soil, these and other causes have tended to injure its reputation as a health resort.

The genuine health resort must be able to sustain its reputation for many years. In looking back at regions formerly known as health resorts, how few of them are recognized in the true sense of the term, at the present time. Physicians are constantly urging patients to places remote, wild, and unsettled. One prominent Eastern physician in one morning ordered patients to the following places: One to Colorado, one to New Mexico, one to the Adirondacks, one to the South, and another to Davos Platz; actually priding himself upon the diversity of places selected, and the tremendous distances these unfortunates would be obliged to travel. The rashness with which physicians without any personal knowledge, only from hear-

say, send patients great distances is a disgrace to the medical profession, and ought to be stopped. How any man lacking practical information concerning health resorts can unreservedly recommend them and risk what remains of comfort and even life, is a stumbling block for any well-thinking man. Practical personal *knowledge* is as necessary for the climatologist as it is for the therapeutist or the surgeon. It is the well-known custom of general practitioners to refuse to attend cases suffering from severe disease of the eye. Why? Simply because they have not sufficient practical knowledge of the subject to treat the patient successfully, and do not care to hazard their own reputation or the safety of the patient by attempting it. In the case of one consulting the average practitioner for change of climate, little hesitation is shown in giving advice which may prove a total wreck to the prospects of the unfortunate sufferer. The importance of careful selection of climate in the treatment of pulmonary and other diseases cannot be over-estimated. In the *Sanitarian* for May, 1882, I have undertaken to give some practical information concerning health resorts, writing only of places I have frequently visited and carefully investigated. It is the intention of this paper to attempt some information concerning the climate of New Mexico. The sections of the Territory of which I will write are the neighborhoods of Fort Union, Las Vegas, and Santa Fé, in the northern central portions, and Forts Selden and Bayard in the south. Although these places are widely separated, the climate is very much the same throughout the Territory, the mildness of the winter of course increasing as one proceeds south.

"New Mexico is situated in latitude 31 degrees, 21 minutes and 37 degrees north; longitude, 103 degrees and 109 degrees west. It contains an area of 121,201 square miles. Large spurs, branching out from the Rocky Mountains,

traverse the Territory from north to south, reaching in many instances an elevation of from 10,000 to 12,000 feet. Immense prairies, between these spurs, form the principal features of New Mexican topography.”<sup>1</sup>

“The rest of the country<sup>2</sup> is a broad expanse of rolling meadow land, at an elevation varying from 7,000 to 6,000 feet, sloping off toward the south, and decreasing in elevation down to 3,000 feet above sea level. Away from the general range, mountains, valleys, and plains are more or less abruptly intermingled. In the words of Dr. Bizzell, ‘Rapid transition and great diversity of elevation, containing within its border deep valleys, gorges, and cañons, associated with mountains and elevated and more or less arid plains.’

“The soil is, of course, a porous one, as is the case throughout the Rocky Mountain region.

“Water courses are few and far between. Such creeks as there are, all have their fountain-heads in the regions of eternal snow. The water is clear and supposedly chemically pure, being largely melted snow. Temperature of mountain-stream water about 58° F.

“Vegetation is as spare as it is in Northern Colorado, notwithstanding the more southern latitude. The pine growths of the mountains and mountain plateaux are not sufficiently dense to impregnate the air with terebinthine odors, and thus to be considered as a direct antiseptic agent for continuous inhalation.”

#### ELEVATION.

“Every degree of altitude is represented, from 3,000 feet to 8,000 feet and over. The Atchison, Topeka, and Santa Fé Railroad traverses the Territory from north to south. Along its line have grown up the principal towns and settle-

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<sup>1</sup> Circular issued by A., T., & St. Fé R. R.

<sup>2</sup> Dr. Tyndale in *Boston Med. and Surg. Journal*, vol. 108, 1883, p. 265 and p. 313.

ments, representing all the above elevations. Travelling through Kansas on the same road it became clear to my mind that coming from the east through that State, and passing through New Mexico from north to south, an invalid is enabled to make a slow journey, beginning at a comparatively low altitude in Kansas, and travelling westward, to gradually ascend, until an elevation of from 6,000 to 7,000 feet is reached. This may be accomplished without deviating from a straight course westward, and yet to stop at towns of such size as to afford the necessary comforts of life, good food, society, medical attendance, and other things pertaining to civilization. To illustrate this I will give the name of such places, together with their elevations, from east to west on the railroad.

"In Kansas; Topeka, 904 feet; Emporia, 1,161 feet; Newton, 1,433 feet; Larned, 2,015 feet; Kinsley, 2,207 feet; Dodge City, 2,499 feet; Lakin, 3,020 feet.

"In Colorado: Las Animas, 3,959 feet; La Junta, 4,117 feet; Trinidad, 6,034 feet.

"In New Mexico: Las Vegas, 6,452 feet; Santa Fé, 7,013.

"Beginning in the south, at the junction of the Territory of New Mexico with Old Mexico and the State of Texas, the figures run upwards toward the north to Raton, near the Colorado line, as follows:

"El Paso, 3,662 feet; La Mesilla, 3,844 feet; Socorro, 4,665 feet; Silver City, 5,890 feet (not reached by rail); Albuquerque, 5,006 feet; Las Vegas, 6,452 feet; Raton, 7,861 feet."

The first section of New Mexico interesting to the health-seeker is Fort Union, and it would be impossible to describe it better than Dr. Gardner, U. S. Army, who was stationed here, and experienced its trying effects on the newly-arrived. The first days and weeks are in many cases spent in suffering; the altitude is distressing, the constant wind and dust wearying, the tough, disagreeable meat and wretched

food and water simply discouraging, and one is forced to ask the question in despair: What am I here for? After a while these disagreeable impressions wear off, and man, who can accommodate himself to almost any thing in this world, begins to forget his discomforts here, or else to determine to ignore them. Occupation will help to do this, and the summer weather will help to lull one's fears; but when February and March arrive the situation is indeed a serious one, and every protection and possible comfort is needed to carry the invalid or delicate person through safely until June. The experience of Dr. Gardner was much like that which I went through with after my arrival at Fort Union, and for some weeks afterward. It has been the experience of others of my acquaintance, and it must be the lot of many to suffer in the same way. The climate of Fort Union is supposed to be changing, and undoubtedly it is, as well as other sections of our country. The town of Watrouse, New Mex., eight miles south of Fort Union, would furnish very simple accommodations for summer residents, but could not be recommended at all in winter. The inhabitants are mostly Mexicans, and life would be very dull and monotonous. At Fort Union itself no accommodations could be furnished, there being neither hotel, or residents who are not connected with the military post.

"Fort Union<sup>1</sup> is situated in a narrow valley on the eastern slope of the Rocky Mountains, and is about 6,835 feet above the level of the sea. The soil around it is composed of fine sand, with a slight admixture of yellowish clay, and is underlaid by trap-rock and irregular beds of dark lava, which have apparently overflowed from a volcano now extinct, about thirty miles to the northward of the Post.

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<sup>1</sup> Dr. W. H. Gardner, U. S. Army, cited in "Circular No. 8," S. G. O., 1875, p. 303.

"Wind from some quarter is almost constant, and the soil being light and sandy, is blown about in clouds of blinding, suffocating dust, that irritates the air passages, and is the prevalent cause of catarrhs, pharyngitis, and bronchitis.

"The diurnal variation in temperature is very great, the thermometer frequently showing at 6 A. M. but 60°, and at 2 P. M. 97°; even in midsummer nights one or more blankets are always comfortable to sleep under.

"Now, from the foregoing causes, viz.: the high elevation, the constant winds, the suffocating dust storms, and the great diurnal variation in temperature, I do not believe this Post can be favorable for any kind of lung disease, and though my medical experience here is limited, I believe it will point to the same conclusion.

"The question of increased altitude as a source of disease has been one of great interest to me personally, and as I suffered as much from it myself as any other case I have seen, I will give you the history of my own case. Shortly after arriving at the Post I was attacked with a fulness of the head, ringing in the ears, mental hebitude, and confusion of ideas, dizziness, and headache. Thinking these symptoms might be caused by constipation, dyspepsia, or torpidity of the liver, I took a mercurial purgative, and followed it up with a dose of Rochelle salts, which relieved the fulness of oppression for a day or two, but it at once returned, the dizziness and confusion of ideas increased, and a feeling of numbness and tingling commenced in the fingers of the left hand and gradually spread until it involved the whole left side, even the muscles of the tongue being involved in the paralysis so that I could not articulate. There was also oppression of breathing, throbbing of the carotids, and slight dilation of the pupils. The only medicine handy at the time of the first attack was a bottle of chloroform; and thinking the symptoms might be due to

spasm of the cerebral or pulmonary veins, I poured a dram or two on my handkerchief and inhaled it, when the disagreeable symptoms promptly subsided. The next day, on my visit to Dr. Moffat, of our corps, (who you will recollect was lying here disabled with a broken leg) I told him of my troubles, and he thought they were due to malarial poisoning, and advised me to commence a course of quinia and arsenic, which I at once did, taking twelve grains of quinia and  $\frac{1}{10}$  of a grain of arsenic each day. But in the course of five or six days, while under the full influence of these medicines, I had another attack, in all respects similar to the first, coming on after a hearty dinner, which was relieved by a prompt emetic. Shortly after this second attack I was sent for to attend a case of midwifery at Mora (a little town in the mountains, fifteen miles northwest of the Post and about 400 feet higher in altitude), and while there alone I had another attack more severe and prolonged than the other two, and upon this occasion I certainly thought there would be another vacancy in the Medical Corps to fill, for I took emetics, bromide of potassium, and chloroform *ad nauseam* without the least effect.

"The symptoms went off before morning, but when I got back to the post I brought the Darwinian theory to bear on the case. If the environment of an animal be suddenly changed and the animal does not change its habits to suit its environment it will be speedily eliminated. The only radical change in environment I could detect here was decreased atmospheric pressure from increased altitude and consequently deficient oxygenation of the blood. The indication, therefore, was either to supply the deficiency of oxygen to the blood or to reduce the volume of blood to the decreased amount of oxygen. The latter alternative seemed the easiest and the most certain. I therefore decreased the amount of my nitrogenous food, and made up

the quantity by laxative vegetables and fruits, and have been in good health ever since. I have seen two cases since, in every respect similar to mine, and they have promptly succumbed to the treatment indicated: that is, decreasing the amount of blood to the decreased amount of oxygen, by cathartics and decreased animal food.

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"One question I should like to add before closing: Are adobe quarters productive of rheumatism? I believe they are a fruitful source not only of rheumatism, but sciatica, and other forms of neuralgia."

Such is the description given by Dr. Gardner, and his experiences will be repeated very often, I have no doubt.

The following table from the Post Hospital records may prove interesting, showing the even ranges of temperature for the years 1880, 1881, 1882, 1883, and 1884.

#### FORT UNION, NEW MEXICO.—1880.

Mean temperature for January	39.37	Max.	68	Min.	5
" " " February	no observations taken (Steward absent).				
" " " March	39.83	Max.	68	Min.	10
" " " April	51.49	"	74	"	14
" " " May	60.59	"	84	"	29
" " " June	69.97	"	91	"	32
" " " July	67.76	"	92	"	48
" " " August	65.03	"	84	"	41
" " " September	59.76	"	80	"	24
" " " October	47.84	"	78	"	13
" " " November	29.72	"	69	"	15
" " " December	33.49	"	68	"	11

#### FORT UNION, NEW MEXICO.—1881.

Mean temperature for January	26.25	Max.	62	Min.	25
" " " February	34.68	"	67	"	21
" " " March	37.77	"	69	"	2
" " " April	52.86	"	75	"	5
" " " May	60.33	"	76	"	28
" " " June	73.77	"	94	"	45
" " " July	71.24	"	96	"	45
" " " August	66.80	"	84	"	40
" " " September	59.85	"	84	"	25
" " " October	50.47	"	79	"	18
" " " November	33.27	"	58	"	5
" " " December	37.16	"	70	"	0

## FORT UNION, NEW MEXICO.—1882.

Mean temperature for	January	29.86	Max.	66	Min.	11
" "	February	36.44	"	62	"	0
" "	March	41.71	"	74	"	12
" "	April	47.98	"	80	"	5
" "	May	52.61	"	79	"	23
" "	June	65.38	"	91	"	32
" "	July	68.58	"	92	"	40
" "	August	65.79	"	89	"	36
" "	September	60.84	"	83	"	21
" "	October	51.38	"	76	"	14
" "	November	37.40	"	75	"	4
" "	December	33.01	"	66	"	10

## FORT UNION, NEW MEXICO.—1883.

Mean temperature for	January	29	Max.	61	Min.	30
" "	February	32	"	62	"	7
" "	March	43	"	71	"	10
" "	April	47	"	75	"	9
" "	May	58	"	85	"	21
" "	June	68	"	95	"	30
" "	July	69	"	90	"	44
" "	August	66	"	85	"	42
" "	September	60	"	86	"	27
" "	October	48	"	75	"	15
" "	November	41	"	71	"	5
" "	December	34	"	69	"	2

## FORT UNION, NEW MEXICO.—1884.

Mean temperature for	January	31.56	Max.	65	Min.	13
" "	February	34.75	"	67	"	21
" "	March	39.30	"	63	"	9
" "	April	43.61	"	72	"	15
" "	May		"		"	
" "	June		"		"	
" "	July		"		"	
" "	August		"		"	
" "	September		"		"	
" "	October		"		"	
" "	November		"		"	
" "	December		"		"	

The total rain and snow fall for Fort Union for the years 1880, 1881, 1882, 1883, were as follow:—

1880, . . . 19 inches, 1882, . . . 9.41 inches.

1881, . . . 22 " 1883, . . . 14.50 "

Concerning the dryness of New Mexico the average hu-

midity is about 38%, while in the following States and localities it is as follows :<sup>1</sup>

" New England States, 75%, Middle Atlantic States, 74%, South Atlantic States, 79%, Gulf States, 82%, Lower Lake region, 70%, Upper Lake region, 70%, Ohio Valley, Tennessee, and the Northwest, 73%, Lower Mississippi Valley, 58%, Denver, Colorado, 42%."

The "rainy season" commences in June and lasts through the summer and fall. By rainy season we refer to occasional showers perhaps daily for a week or so. Now and then a terrific hail storm will rage for a short time, followed by rainy and cool weather. May 31st, a severe hail storm visited this Post smashing hundreds of panes of glass and doing considerable damage otherwise. The hail stones were very large, some quite the size of eggs. The houses were flooded with water, and it was very cold for a week or two, fires being necessary in all the rooms. From the middle of June the sun shines with intense force, making out of doors occupation almost impossible, but, strange to say, cases of sunstroke almost never occur. The constant wind in New Mexico is a great protection to those who are exposed to the strong rays of the summer heat. About three or four o'clock in the afternoon clouds will appear, followed by wind or rain, and the evening and nights are cold. These sudden changes, together with the action of the water, excite a loose condition of the bowels, and diarrhoea, and even dysentery are of frequent occurrence. The high altitude affects most people very unpleasantly, at least for a time, and many suffer until they leave the country. "Nervousness," neuralgias, and all heart-trouble seem to increase. A strong desire to sleep, but awakening without much sensation of refreshment, if any. Weariness, languor, confusion of ideas, inability for exertion, or study, depres-

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<sup>1</sup> Circular A., T., & St. Fé R. R., concerning New Mexico.

sion of spirits, almost to despair, are common ailments due to this climate and elevation. Fast walking and running are out of the question, and troops are not allowed to be drilled in the "double quick." Loss of appetite, indigestion, dyspepsia, and biliousness show that the intestinal tract is affected by the change. Colds, catarrh, etc., are very prevalent; and pneumonia is rapidly and generally fatal. The houses are mostly built of "adobe," sun-burnt brick, and are cold and chilly, except in the hottest weather. Rheumatism on this account is *very* prevalent and severe. Glandular inflammations are common. Simple adenitis of the groin, without apparent cause, is very common.

If I may be pardoned in this paper for mentioning servants, I would say that it is almost impossible to get any, and ladies coming from the East and attempting housekeeping without servants soon lose health and strength, if they are not permanently *aged* or completely broken down. From amongst the lazy, shiftless population of natives it is quite impossible to obtain help, and ordinary "niggers," who would not be tolerated in well-regulated eastern homes, receive from twenty-five to thirty dollars a month and are hard to find at that.

All living expenses are very high, and life at best is perplexing, discouraging, joyless, and tends to despair. There is nothing to cheer or to interest one. Even the bravest, who shot off with many plans and energetic promises, soon fall off into the dreary humdrum struggle for an existence. The desperate character of many of the inhabitants forbids a moderate investment in either cattle, mines, or farms, and the country is so covered with Spanish land grants that it is hard to obtain any just title. The whole region has, in my opinion, been over-estimated in every particular. It cannot be claimed that I have any interest in making these statements, which seem any thing but complimentary. I am not

a discouraged adventurer here, neither have I any reason to speak ill of the land in an unkind spirit. I endeavor in this paper to do my duty in explaining, as fully as I am able, to the many in the East who may be ordered here and tempted to come for health and life, the state of affairs they must expect to find. Leaving comfortable homes and loved friends to come out to this wild, semi-civilized, inhospitable region, to spend all their money and hope, and at last to go back discouraged and weakened, or to be returned *dead*. Many undoubtedly come here too late, *some* come and are benefited, but, alas! how few, and at sacrifices which make life itself an expensive luxury. For the wife or mother struggling here with such patients to take care of, the blame for ordering the family out West to New Mexico, if it is to be placed on any one's shoulders, must be, or ought to be, a heavy load to carry. Some, discouraged and rapidly sinking, hasten home with wife and children, and *die on the cars*. Consider for one moment the anguish of death in such a position, and the difficulties of widow and children, cut off from the consolations and assistance of friends, perhaps without money, and at the mercy often of unprincipled scoundrels. It may happen some true-hearted man is at hand to help honorably, but, alas, it is not always, if even occasionally, the case. The death of patients amongst strangers is always hard, even at our health resorts in older lands—imagine for a moment the sickening experience in the wilds!

There is, however, one feature of New Mexican life which is to be remembered, and that is the glorious sunshine. Even in the midst of depressing, demoralizing dust storms, the sun shines out to encourage and cheer and show us that the God of nature still reigns. Then, too, the snow-capped peaks of the "Rockies," rising to a grand height, add beauty to the scene, and form a striking frame-work to the

picture of this wild land. The early mornings are beautiful, and the refreshing evenings are thoroughly enjoyed.

If it were not for the blinding dust storms, which suffocate and make facing them while walking or riding well-nigh impossible, there would be much to admire; but the dust destroys all hope of falling in love with the country, and when this, the greatest evil, is added to all the others I have mentioned, life in New Mexico has verily few attractions. The poverty-stricken soil is so seldom refreshed with rain that the cultivation of vegetables is almost impossible, and those to be obtained from the Mexicans are miserable and very expensive. The meat is generally poor and tasteless. The winters draw so heavily upon the sustaining powers of the cattle, that during a greater portion of the year they are poor and tough and not fit to eat, although they are supplied as food, and no other meat is obtainable except a little mutton, as miserable as the beef. Poultry is very hard to find, and of an inferior quality.

Probably the pleasantest spot in the whole Territory, and the healthiest, unless we except Santa Fé, is the Las Vegas Hot Springs region. The Springs are beautifully situated about seven miles from the town of Las Vegas (the meadows) at the entrance to the Gallenas cañon. They are set in the midst of the foothills so cosily that violent wind and dust storms lose most if not all their tormenting power. The altitude of the Springs is six thousand seven hundred feet above the level of the sea.

The Springs are easily reached by a branch of the Atchison, Topeka & Santa Fé R. R., and the ride from Las Vegas is indeed a pleasant one. The railroad company, with considerable enterprise, have spent large sums of money in making improvements, and few places west of the Mississippi can boast so many attractions. Dr. Gordon, lately of the United States Army, is located permanently at the

Springs, and patients sent to his care will receive the best professional attention possible. There are from thirty to forty of these celebrated springs, situated at the base of a foot-hill sloping down into the Gallenas river.

"In their thermal properties they are divided into two classes: One including springs of a temperature from one hundred and twenty degrees F. to one hundred and forty degrees F.; the other springs varying from seventy-five degrees to one hundred degrees F. There are thirty of the former and ten of the latter.

"Twenty-five of the principal springs have been excavated, so as to form reservoirs, and have been walled and covered with the native red sandstone. Many of the springs are not at present required for the bath-house supply. A single spring, No. 6, furnishes, alone, thirty thousand gallons of water daily, at a temperature of one hundred and forty degrees F.

"The warm springs flow from these basins or reservoirs direct into the bath-houses, while the cooler ones run into large tanks upon the hillside, and are thence conducted into the bath-houses to furnish cold water as required.

"The skin after taking a bath in these waters has a soft velvety feeling and a freshness of aroma savoring of the cosmetic."<sup>1</sup>

These baths furnished at the Las Vegas Hot Springs are supposed to be beneficial especially in rheumatic, scrofulous, and other affections, and are useful in many forms of skin diseases. There are two bath-houses, one for the ordinary hot, cold, and vapor baths, well arranged and very comfortable, and the other a rudimentary affair for mud-bathing. The main bath-house is built of stone, and is really a handsome structure, two stories high and two hundred feet long by forty-two feet wide.

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<sup>1</sup> Circular, A., T., & Santa Fé R. R.

The bath-rooms are in the lower story, the upper being occupied by the offices of the physicians, drug-store, post-office, bath-office, etc. The bath attendants are at present excellent, and have been carefully selected. It is claimed that the entire capacity of both bath-houses is 1,000 baths per day, but of course the number of bathers do not require so much attendance as yet.<sup>1</sup>

Separate apartments with complete bathing apparatus are furnished those suffering with contagious diseases.

The baths are given at a temperature of from 90° to 100°.

The mud baths given at these springs are similar to the celebrated peat baths of Franzensbad, Bohemia. "The percolation of chemical water for centuries through the earth surrounding these springs has produced this peat, or mud. Viewed under the microscope it appears gelatinous, its earthly properties having undergone a change."

The average temperature of the mud bath is about 108°.

One hundred and six degrees is probably the best, and is very agreeable.

The average duration of the bath is one hour, but the time may vary from thirty minutes to three hours. One bath is usually taken each day. Upon leaving the tub the patient is washed off thoroughly under a graduated douche, and after being "hosed off," is then rubbed down clean and dry, and placed on a comfortable couch in the "resting room" for half an hour. The bath is supposed to act like

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<sup>1</sup> The baths, including attendance, towels, etc., cost as follows :

Shampoo baths . . . . .	Each . . . . .	\$1 00
Electric " . . . . .	" . . . . .	1 00
Medicated " . . . . .	" . . . . .	1 00
Vapor " . . . . .	" . . . . .	75
Vapor and pack baths . . . . .	" . . . . .	1 00
Tub baths . . . . .	" . . . . .	50
" and pack baths . . . . .	" . . . . .	75
Mud baths, singly . . . . .	" . . . . .	3 00
" " three for \$5 00 ; five for \$8 00 ; seven for \$10 00, and ten for . . . . .	. . . . .	12 50
Special treatment, Massage . . . . .	. . . . .	7 00
Massage at time of taking bath . . . . .	. . . . .	50
Bathing hours, 6 A. M. to 6 P. M.		
On Saturdays, bathing hours 6 A. M. to 10 P. M.		

a huge poultice, extracting by free diaphoretics, or sweating, diseases that have baffled skilful physicians both at home and abroad. The pack and massage are often ordered to follow the mud baths as a re-inforcer.

In preparing the mud baths, the mud is first freed from all foreign substances, such as sticks, stones, etc. Each tub is then half filled with mud, and mixed up with the warm spring water, to the consistency of paste. The bath is warmed up by steam at bathing time to the required degree of heat ordered by the physician in charge of the patient. Every five days *fresh* mud is ordered, and the old mud cleared out. It is amusing in passing through the bath-house to read the labels. Mr. S.'s mud; Rev. Mr. D.'s mud; Mrs. A.'s mud, and so on. The boxes look like coffins, and the bather is held down in the tub by a board placed across the chest and firmly fastened down; otherwise he will rise on top of the mud. It is said that at first ladies shrink from entering the repulsive stuff, and can hardly be forced to do so; but having once enjoyed the bath, it is hard to keep them away from it!

At the Hot Springs there are several local attractions in connection with the hotels—museum of antiquities, aviary, zoölogical collection, etc., besides a large green-house, well filled with floral and variegated plants. The hotels at the Springs are in postal, telephonic, and telegraphic connection with Las Vegas and the outside world. The hotel rates are from \$3 to \$4 per day—\$17 50 to \$24 a week. There are several cottages upon the grounds where private board at reasonable prices can be obtained.

The next most desirable residence for the temporary visitor to New Mexico if not altogether the best place in many respects, is the old city of Santa Fé. It is at first a forbidding place but one learns to like it, and although the native inhabitants are mostly dirty uninteresting people,

really delightful society is to be found in Santa Fé the year round. Living expenses are high in Santa Fé as elsewhere in the West, and servants few and hard to find—but compared with all the other towns in New Mexico, Santa Fé is certainly the most comfortable. The same climatic advantages and drawbacks exist here as at Las Vegas and Fort Union and other New Mexican towns. I attach to this paper another report from the "Army Records" showing the characteristics of the climate and some of its disadvantages:

"The city of Santa Fé<sup>1</sup> is pleasantly situated on an extensive plateau on the western slope of the Rocky Mountains at an elevation of 6,850 feet above the level of the sea, and in latitude  $35^{\circ} 41'$  north, longitude  $28^{\circ} 59'$  west. To the north and east rise the foot-hills and peaks of the Rocky Mountain range; on the south the plateau is gradually lost in spurs of mountains shooting out of the main range, and on the west it terminates somewhat abruptly in the valley of the Rio Grande. \* \* \* Fort Union is distant about 100 miles to the eastward. \* \* \* To the south runs the main road to Albuquerque and Southern New Mexico, and less important roads to the neighboring towns. The Rio Grande runs in a southwesterly direction from Santa Fé about eighteen or twenty miles distant at the nearest point. A small mountain stream—a tributary of the Rio Grande—called the Rio de Santa Fé nearly bisects the town. The soil of Santa Fé and vicinity is dry, light, and sandy and yet very fruitful. The country for miles about Santa Fé is destitute of trees. The large growth is said to have been cut away at an early date in the history of the place for fuel and for better security against hostile Indians, and a subsequent growth of large trees has

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<sup>1</sup> Information concerning Santa Fé, New Mexico, furnished in "Circular No. 8," Surgeon-General's Office, by Surgeons Alexander and Huntington, United States Army.

not appeared, though stunted cedars and pines are very common. This want of vegetation detracts much from the natural beauties of the town and vicinity. On the hills toward the mountains are found large pines and cedars. The piñon, a species of pine, furnishes the almost sole supply of fire-wood. It is brought for miles on the backs of donkeys, and sold by the load in the plaza at from twenty-five cents to one dollar, according to the season of the year or severity of the weather. The natural drainage of Santa Fé is excellent, and is materially assisted by an extensive system of *acquias* or canals around the town. Still, little attention is paid to the subject and many of the narrow streets and lanes of the city are excessively filthy. The river water is very extensively used for drinking purposes and is excellent. Good water, but a little impregnated with lime, may be obtained by wells at a depth of from ten to forty feet.

"The population of Santa Fé is about 6,000, of which the larger portion is Mexican and Indian, or an admixture of the two. The American element is rapidly increasing and already has the chief influence in matters of trade and politics.

"The place is irregularly built of adobe, and when seen from the approaches of the town has an exceedingly uninviting appearance. The houses are generally built on the Spanish plan, a quadrangle with an interior court yard, the entrance being through a gateway generally kept closed. The older portions of the town are built upon narrow lanes and passage-ways rather than upon streets. The better portion is the more recent, and is inhabited by the American residents. The plaza holds a conspicuous place as a business centre and about it are the civil and military offices."

To the excellent description from which I have just quoted is appended a communication from Dr. Smith,

of the United States Army concerning the climate of Santa Fé for invalids. His remarks are very valuable and should be given considerable weight in selecting this climate for pulmonary patients.

" From an experience of fourteen months and upon rational grounds, I cannot coincide in the popular belief that Santa Fé and the contiguous localities, of equal or superior altitude, are well adapted as a residence for persons suffering from pulmonary tuberculosis, heart disease, or any cause producing obstruction to free and ample respiration. The universal testimony is, so far as I can ascertain, that a stranger to the rarefied atmosphere, however sound his pulmonary and circulatory organs may be, is almost invariably affected by a great oppression in respiration upon his advent into this elevated country, accompanied naturally by an unwonted lassitude and indisposition for exertion.

" There have been in the case of two or three of my acquaintances ugly symptoms of a partial paralysis of the organs of locomotion and speech. A continued residence, however, is said to overcome these unpleasant effects in persons of *sound* and *robust* health, and from the number of Americans and Germans residing in the higher regions of New Mexico, who transact their business at no small expenditure of physical exertion, I believe this to be the case, and that *in time* an accommodation obtains between the lungs and the somewhat diminished quantity of oxygen.

" As regards the *invalid*, whose breathing apparatus is crippled by tubercular deposit, by chronic pneumonia, or whose blood, whatever may be the cause, requires full aeration, I deem it worse than useless for him to endeavor to regain health or even comfort in such localities. I regard my lungs (and my chest measurement is forty-four inches) as perfectly sound, and yet, after reporting for duty in Santa Fé, I could not, as a general rule, breathe comfortably, al-

though at times, when a damp atmosphere prevailed, I could not notice any impediment to respiration. The past summer (1874) was exceptionally warm and I was at intervals asthmatic to a terrible degree, crushed actually by a feeling of impending dissolution. The common advice to me was 'Wear it out; you will be all right next year.' No sooner, however, had I started East than my troubles, as I descended in altitude, lessened proportionably."

The places south of Santa Fé in my opinion become less and less desirable, although one seeking a very mild winter climate might try Silver City if suitable accommodations could be found. For a single man a certain kind of living might be put up with for a time, but for the invalid, or for an Eastern family used to comforts and even luxuries of life, a residence further south than Santa Fé or Albuquerque is, in my opinion, undesirable. The Rio Grande valley has some advantages in its mild winter and absence of snow. The summers are said to be cool and pleasant, but when I rode through on horseback in 1867 I found the climate hot enough. The best opinion concerning the climate is to be found in the reports of the medical officers to the Surgeon-General's office and those on Fort Selden and Fort Bayard now presented. The climate was the same then as now and the officers who made the reports did so only after careful investigation.

"Circular No. 8, Surgeon-General's Office, Fort Selden, New Mexico." Report of Dr. Jessop, U. S. Army :

"Fort Selden is situated on a sandy basin one and one half miles from the Rio Grande, in southern New Mexico. Latitude  $32^{\circ}25'$  north; longitude  $30^{\circ}$  west; altitude 4,250 feet. Fort Cummings, fifty-five miles west—Fort Bliss, Texas, sixty-seven miles south (nearest town La Mesilla).

"Lung troubles are comparatively rare at Fort Selden, as are all diseases of the respiratory organs, excepting catarrh, which I prefer to consider separately from bronchitis, as it mostly affects the mucous membranes of the nares, tonsils, and larynx, and, I

think, seldom extends even to the trachea. It seems to be produced by the almost constant drifting of the irritating dust peculiar to this region, and few new-comers who are much exposed in the open air escape it. It gradually wears off as they become acclimated. Women, from their in-doors habits, are usually freer from it. The native New Mexicans are not at all affected by it. Many of them, however, suffer from a form of bronchitis, induced it is thought, by their peculiar fashion of smoking the cigarita, *i. e.*, by inhaling the smoke into their bronchial tubes and exhaling through their nostrils. The climate of this part of the valley of the Rio Grande will improve and probably tend to the cure of many patients afflicted with commencing phthisis, but only by a residence here, not a sojourn of a few months. I think I am within the mark in stating that it will take from eighteen months to two years to acclimate them. To those in advanced stages of consumption, no such benefit can accrue. Added to the annoyance of the dust-storms, are the distance from home and the impossibility of obtaining many of the comforts, and especially the varieties in food, which the sick always crave. The prognosis is extremely serious if diarrhoea be a complication, and here I may observe that all cases of chronic diarrhoea appear to do badly at this Post, and that, with my present convictions, I would not suffer, if it could be avoided, a patient laboring under this disease to remain at Fort Selden or any point where the Rio Grande constituted the water supply. The enervating nature of the climate has doubtless much to do with the ill-success attending the treatment of such patients. As regards chronic bronchitis, I can only speak for New Mexico, and, for that disease, I consider the climate of this region as the best in the Territory."

Near Ft. Bayard is a bright little town called Silver City, which I have already briefly referred to. Grant county is considered one of the best counties in the Territory, and the business enterprise of Silver City is very much in its favor. The town is pretty well supplied with stores, and living is not quite so tiresome here as at many other places in the Territory. Ft. Bayard is situated in the extreme southwest corner of the Territory, in latitude  $30^{\circ} 40'$  north, longitude  $31^{\circ} 25'$  west, at an altitude of 6,022 feet.

The military Post is one of the most delightful in the

West, and a great favorite with the Army. Diseases of the heart do badly here, and the climate, excepting that it is milder in winter, is much like the northern sections already described. It is a long way from home for the invalid, and summer "*wash-outs*" on the railroad make the States seem very far away indeed sometimes.

"Circular No 8, War Dept., Surgeon-General's Office, 1875. Fort Bayard, New Mexico." Report of Dr. Wilson, U. S. A.

"In bronchitis, either acute or chronic, this climate is unfavorable either for cure or relief. The air is too rarefied and too stimulating, and acts almost as an irritant to the bronchial mucous membrane. I have also observed in even slight cases of catarrh attended with cough, that they are very intractable. I have seen several cases of phthisis, and have one at the present time under my charge, but I have not seen any beneficial results produced by this climate. They have all gone on from bad to worse, and finally died. I believe that it is only in the very early stages of tubercular disease that this or any other climate can exert a beneficial influence. \* \* \* There are, so to speak, two classes of cases, one of which is characterized or accompanied by a dry hacking cough, but with little expectoration and a tendency to haemoptysis. In the other, there is copious secretion from the bronchial mucous membrane. This latter class would be benefited by a mild, dry, climate not subject to sudden changes and of a lower altitude than this, say 2,000, or 3,000 or 4,000 feet. The former class would lead a life of torture here, and this climate or one similar to it would only add to the mischief already done. They would be benefited by a mild, moist climate in close proximity to the sea. Phthisis is almost unknown among the Mexican population here, notwithstanding their filthy habits, probably on account of their living nearly all the time out of doors and being natives of the soil and accustomed to this climate. I know that horses brought here from the States, and cattle introduced here go down in condition for the first year until they are acclimated, and I believe that the human race require also a certain time for acclimation."

In summing up the *advantages* of the New Mexican climate we find first a considerable degree of *elevation*. Dryness is

very decidedly present. Vivenot<sup>1</sup> classifies moistures as follows:

Dry, below and up to 55%.

Moderately dry, 56 to 70%.

" moist, or moist, 71 to 85%.

Excessively moist, 86 to 100%.

Referring to the tables taken from A., T., and St. Fé R. R. circular we see that New Mexico can boast of a *very dry climate*. The percentage of clear sunshiny days is very great, and the amount of inclement, disagreeable weather is proportionately small. One can get out of doors for a considerable part of the winter. The *disadvantages*, and they are many, have been mentioned. The principle one is the *great elevation*. Here we have the advantages and the disadvantages of *elevation*, and it is hard to say which are greatest. It is worth while to mention that when "the country in the northwest, middle, and eastern States, is ice-bound and frozen, the residents of New Mexico are basking in genial sunshine."

Undoubtedly this paper may be read by English people contemplating a visit to the Southwest. To those used to the climate of England, only excepting the beautiful Isle of Wight and the grand south coast, New Mexico will prove an interesting, and I believe, in many respects, a profitable change; but—and it is a large *but*,—we have in the United States many desirable climates: the Adirondacks, the Mountains of Tennessee, the regions of Moosehead Lake, Montana, and last, but not least, the glorious climate of Colorado. The warm climates may be good, and the mild winters desirable, but the evidence lately seems to show that the cold clear climate of Colorado is the best for cure, and the best in the end, and the happiest home for the invalid obtainable. In coming to this climate and to this

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<sup>1</sup> Quoted by Dr. Tyndale in *Boston Med. and Surg. Journal*, l. c.

country, and leaving behind the comforts and luxuries of the last, and accepting Western hospitality is a great change indeed.

To the average Englishman, accustomed to his comfortable home and well-regulated table, be he in robust health or an invalid, the American hotel, and especially in western towns, is simply discouraging. To the West people flock for money-making, and personal comforts are of secondary consideration. The invalid must take his chances with the rest. Rents are high and separate houses are hard to find—one must choose between the hotel and the boarding-house. The first-class hotels are, of course, very fair, but the charges are exorbitant, considering what one gets. The boarding-houses are simply unendurable, both as regards food and accommodations generally. Society is, of course, very much mixed, although there are always some agreeable people at all places.

For one, however, willing to endure hardship and take life just as he finds it, and with plenty of means at his disposal, and who can plan and carry out the journey comfortably, it may be well to seek the American health resorts of Colorado or New Mexico. When we consider the bright sunshine, so generally present, and the invigorating, healing atmosphere, which is especially obtainable in Colorado, and the opportunities for out-of-door exercise, and the possibility of regaining health, the journey is worth all the trouble and expense and suffering. It is important to know where to start for, and the proper route to take, besides the time of year and the expense. It is best in going to Colorado to make Denver the first objective, and for New Mexico, Santa Fé or Las Vegas Hot Springs.

The hotels are constantly improving, and better attention is paid to the comfort of guests. New houses are constantly being built, and conveniences, which are so necessary for

the invalid, are also increasing each year, and better protection against the winds and dust are constantly being afforded. A well-filled purse is, however, of the first importance, and to creep along with insufficient means only brings unhappiness and disaster upon those attempting it. Certainly it is quite unnecessary to banish any one to the Davos Platz, which does not begin to afford the advantages to be found in Colorado or New Mexico, and is nearly if not quite as expensive for the Englishman or American as a trip to the far West.

For the invalid going either to Colorado or New Mexico, one word of caution is necessary, and that is: lessen the dangers of hemorrhages by approaching the elevated regions *gradually*. Many lives are undoubtedly sacrificed by this hasty *rush* from New York to Denver or Santa Fé. The sleeping cars are luxurious and the dining cars excellent, but a rest for a few days in Chicago or Kansas City, and another rest half-way before reaching Denver or Las Vegas is most desirable, and will pay in the end without doubt.

The best season to go West is in the spring or fall, to be somewhat acclimated and settled before winter, and to avoid for the invalid the journey in hot, dusty cars in summer is not to be lost sight of. A well-filled lunch-basket, and a flask of good wine and another of brandy, besides some preparations of easily-taken beef-essence, like the London Manufac. Co.'s preparation, or Valentine's meat-juice, is very necessary for the safety of the invalid, and should not be overlooked. A preparation of coca wine, made by Theodore Metcalf & Co., of Boston, is the best single preparation for travellers that I know of.

This preparation of wine of coca of Metcalf's is desirable for the invalid after reaching either Colorado or New Mexico. Coffee and tea are too stimulating, and exert an injurious influence on the nervous system in these high alti-

tudes. Coca is desirable as a sedative to the nervous system, and at the same time a delicious, invigorating tonic. Constipation is very apt to trouble the traveller not only on the journey, but after his arrival in the new country, and some easily taken cathartic, like Brewer's tartrate of soda, in effervescent granules, or the new and excellent cathartic also manufactured by Metcalf & Co., of Boston—Rhamnus Frangula—will be found very valuable, and will obviate those distressing headaches and general malaise which a long journey is apt to induce. The traveller needs few medicines besides these mentioned. He is seeking for the climate cure, and if he obtains that to his satisfaction, the battle is won.

The hunting and fishing in New Mexico is not to be boasted about. Game is not plenty, and hunting can only be found away from the settlements and at considerable expense and trouble. There is some, to be sure, and the devoted huntsman will find it.

There are many interesting excursions to be made, and the ancient Pueblos offer considerable that is interesting in their history and customs.

As to business enterprises, I should hesitate a long time before advising any one to assume the risk either in "cattle and sheep ranches, mines, or manufactories." For professional men and especially doctors the prospects are gloomy in the extreme, and visitors are not at present numerous enough to offer any inducement to hope for practice from them; the native population would, to say the least, be very undesirable patrons. The schools are of course very inferior, and the territory of New Mexico is not a desirable place to bring up a child in the way he should go. To make the experiment of New Mexico for health is a lottery indeed, and while many may lose their all, *life and health may be found!*

The Atchison, Topeka, and Santa Fé Railroad from Kansas City is *the* route to New Mexico. It is a well-managed, comfortable, and even luxurious road, and the welfare of the travelling public is constantly attended to. The eating-rooms at the stations all along the road are excellent, and directly under the railroad management.<sup>1</sup>

I have tried to explain the situation to the best of my ability. The physician must choose for his patient, and the patient must get the best information obtainable. To those going to New Mexico either for health or pleasure, there is much to be seen and learned of which this short paper cannot treat. To all a pleasant, profitable journey is most sincerely wished.

<sup>1</sup> The following is a schedule of rates to Las Vegas Hot Springs :

	1st class.	2d class.	Round trip, good for ninety days.
Chicago . . . . .	\$46 15	\$35 65	\$57 80
Kansas City . . . . .	31 35	27 75	37 80
Atchison, Kan. . . . .	31 35	27 75	37 80
El Paso, Tex., to Hot Springs . . . . .			22 80



